Stark County Child Fatality Review

Annual Report

2013 & 2014

-Every Child Deserves the Best Chance at a Healthy Future-

Working Together to Protect Our Children's Future

This report includes **preliminary data** from Ohio Department of Health for those deaths of children across Ohio in 2013 and 2014 as reported to the State Health Department by April 1, 2015. Please be aware that data statistics may change as additional child and infant deaths are entered into the national data system. [Some birth or death certificates were not available prior to state reporting deadlines. This data is notated with an * throughout this report.]

Local statistics may change if additional death certificates are filed with local registrars. Additionally, cases under open investigation with law enforcement are unable to be reviewed until the case is closed, therefore any open investigations are not included in this report.

For further information regarding the local data in this report please contact Christina L. Gruber RN, Unit Manager, Stark County CFR Coordinator at the (330) 493-9928 ext. 245. Further information regarding statewide data can be found on the Ohio Department of Health website at ***www.odh.ohio.gov*** or email cfr@odh.ohio.gov .

Page Number

Stark County Child Fatality Review Board Members

BOARD CHAIR:

Stark County Health Department…….	**Kirkland Norris, RS, MPH*; Health Commissioner***

BOARD MEMBERS:

Canton City Health Department…….	**James Adams, RS, MPH*; Health Commissioner***
Canton Police Department……...	**Dave Davis; *Captain***
Mental Health and Recovery Services Board of Stark County…...	**John Aller; *Executive Director***
Plain Township Fire Department……	**Donald Snyder; *Chief***
Stark County Coroner's Office……	**P.S. Murthy, MD; *Coroner***
Stark County Educational Service Center……	**Tamra Hurst; *Treasurer***
Stark County Job & Family Services……	**Deborah Forkas, M.Ed.; *Executive Director Children's Services***
Stark County Job & Family Services……	**Nedra Petro, MPA, LSW*; Deputy Director Children's Services***
Stark County Health Department……	**Maureen Ahmann, DO; *Medical Director***
Stark County Health Department……...	**Kay Conley, MPA, CHES; *Director of Administration and Support Services***
Stark County Sheriff's Office……..	**Ron Springer; *Lieutenant***
Stark Metropolitan Housing Authority……	**Robin Mingo-Miles; *Director of Resident and Community Affairs***

SUPPORT STAFF:

Stark County Health Department……..	**Christina Gruber, RN, BSN, MS; *Unit Manager***
Stark County Health Department……..	**Sherry Smith, RN, BSN, MS; *Director of Nursing***
Malone University……..	**Jessica Chitti; *Student Intern***

Stark County Child Fatality Review Board Chair

Deaths in children can often be considered a good predictor of a community's health. The raw numbers can tell us the overall picture, but only with a detailed review of each and every child death can we learn how to respond best, as a community, to prevent further tragedies from occurring.

Over the past fifteen years, a group of dedicated professionals from public health, children services, health care, law enforcement, safety forces, mental health, educational services, and other social and community service agencies have worked diligently to review the deaths of 769 children under the age of 18. These deaths can be classified by manner in one of the five ways listed below:

· Natural: Death resulting from inherent, existing conditions (congenital anomalies, disease, SIDS, etc.).
· Accident: Death resulting from non-intentional trauma.
· Suicide: Intentional, self-caused death.
· Homicide: Death caused by another.
· Undetermined: Unable to determine manner of death.

Of those 769 deaths: 73% were from Natural causes, 16% were due to accidents, 4% were homicides, 3% were suicides, and in 30 cases the official classification was unable to be determined.

Most recently the board reviewed the deaths of children that occurred during 2013 and 2014. Detailed information from these reviews can be found in this report including the boards' recommendations to the community for prevention of future deaths. Please join us in helping to implement these recommendations across the county to prevent further needless child deaths from occurring.

Sincerely,
Kirkland Norris, MPH
Health Commissioner Stark County Health Department

The National Center for the Review and Prevention of Child Deaths

The primary goal of Child Fatality Review (CFR) process is to reduce the incidence of preventable child deaths in Stark County through a detailed comprehensive local review of the circumstances surrounding the deaths to all children in our community. These reviews are completed by a multidisciplinary team made up of representatives from various local agencies. It's our hope that through this process of reviews and recommendations that we can raise community awareness about the circumstances surrounding preventable child deaths and ultimately eliminate or decrease these deaths from continuing to occur.

The Objectives of Child Death Review- *(The National Center for the Review and Prevention of Child Deaths)*

Ensure the accurate identification and uniform, consistent reporting of the cause and manner of every child death.

Improve communication and linkages among local and state agencies and enhance coordination of efforts.

Improve agency responses in the investigation of child deaths.

Improve agency response to protect siblings and other children in the homes of deceased children.

Improve criminal investigations and the prosecution of child homicides.

Improve delivery of services to children, families, providers and community members.

Identify specific barriers and system issues involved in the deaths of children.

Identify significant risk factors and trends in child deaths.

Ohio Child Fatality Law

In 2000, legislation was enacted that required every county in Ohio to create a Child Fatality Review Board to review the deaths of all children age 17 and under. The ultimate purpose of the Child Fatality Review Board is to decrease the incidence of preventable child deaths by:

- Promoting cooperation, collaboration, and communication between all groups, professions, agencies, and entities that serve families and children.
- Maintaining a comprehensive database of all fetal and child deaths that occur in Stark County in order to develop an understanding of the causes and incidence of those deaths.
- Making recommendations to local agencies for the development of new programs and changes to current programs that will help to prevent fetal and child deaths.
- Advising the Ohio Department of Health of aggregate data, trends, and patterns concerning child deaths.

Summary of 2013 Deaths

There were 39 deaths to Infants and Children, under the age of 18, reported in 2013. This is the lowest number of deaths to children in Stark County since the Child Fatality Review process began in 2000. The bar graph to the right below **(Figure 1)** shows the total number of deaths from 2000 through 2014 with 2013 appearing in yellow.

The following are characteristics of the overall deaths for 2013:

- 56% Male
- 23% African American
- 74% were less than 1 year of age
- 5% were 1-4 years of age

According to the 2010 US Census Bureau, there were 21,576 children under the age of 5 in Stark County. This age group makes up approximately 25% of the nearly 86,000 children under the age of 18 in Stark County. Nearly 80% of the deaths were to children under 5 years of age.

Table 1 and **Figure 2** below show the breakdown of child deaths during 2013 by manner of death and age.

Figure 1: Total Child Deaths 2000-2014

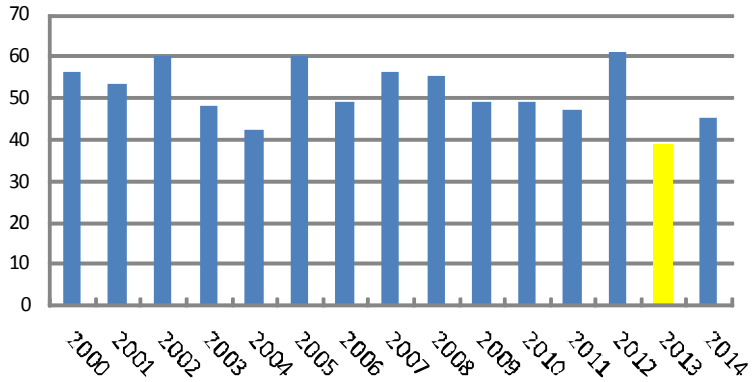


Figure 2: 2013 Percent of Death by Manner of Death

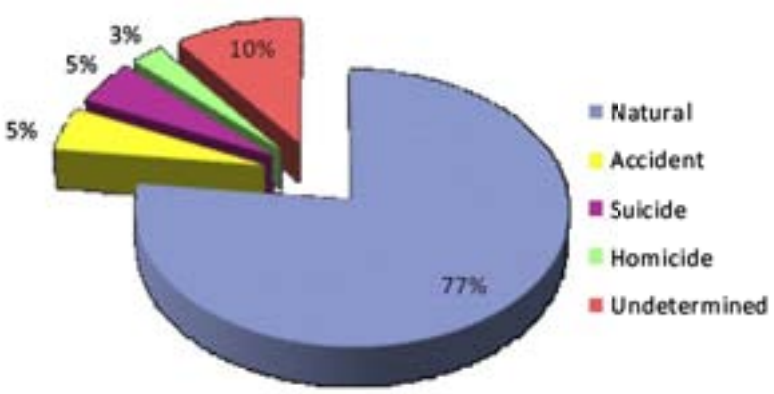


Table 1: 2013 Counts of Death by Manner and Age of Death

Manner of Death	<1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Natural	24	2	1	1	2	30
Accident	1	0	1	0	0	2
Suicide	0	0	0	1	1	2
Homicide	0	0	1	0	0	1
Undetermined	4	0	0	0	0	4
Total	29	2	3	2	3	39

Summary of 2014 Deaths

There were 45 deaths to Infants and Children, under the age of 18, reported in 2014. Although there were more deaths during 2014 then there were in 2013, this number is still below the average number of yearly child deaths of 51. **Figure 3** to the left below shows the total number of deaths from 2000 through 2014 with 2014 appearing in purple.

The following are characteristics of the overall deaths for 2014:

- 49% Male
- 27% African American
- 73% were less than 1 year of age
- 11% were 1-4 years of age

As we have seen for many years, the highest number of child deaths during 2014 were to those children under the age of 5, accounting for 84% of the deaths. As mentioned on the previous page, this age group makes up only one-fourth of the population of Stark County under the age of 18.

Figure 4 and Table 2 below show the breakdown of child deaths during 2014 by manner of death and age. Natural Deaths to children under one year of age continues to be the largest contributor to child deaths in Stark County during 2013 and 2014 with 56 Natural Infant deaths occurring over the two year time frame.

Figure 3: Total Child Deaths 2000-2014

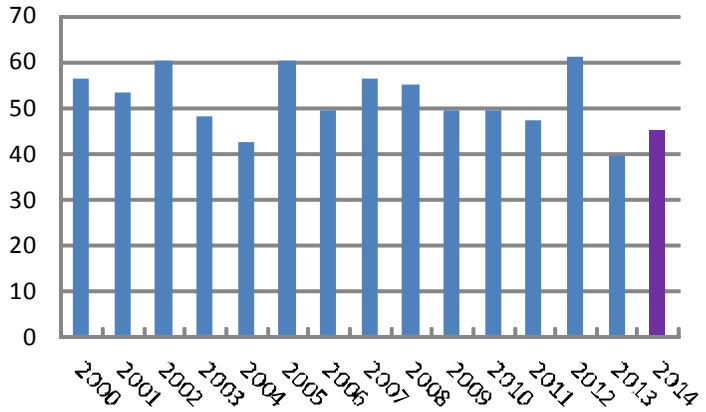


Figure 4: 2014 Percent of Death by Manner of Death

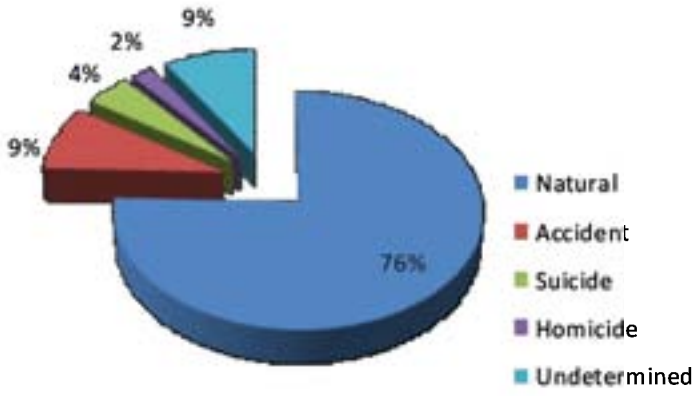


Table 2: 2014 Counts of Death by Manner and Age of Death

Manner of Death	< 1 year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Natural	32	0	0	1	1	34
Accident	0	1	1	0	2	4
Suicide	0	0	0	1	1	2
Homicide	0	1	0	0	0	1
Undetermined	1	3	0	0	0	4
Total	33	5	1	2	4	45

Summary of 2010-2014 Deaths

Table 3: Percent of Death 2010-2014

Manner of Death	Stark County	Ohio
Natural	76%	72%
Accident	12%	14%
Suicide	3%	3%
Homicide	4%	4%
Undetermined	5%	7%
Pending	0%	0%
Unknown	0%	0%

According to reports from the National Center for Review and Prevention of Child Deaths, there were 7,296 deaths to Infants and Children across the State of Ohio between 2010 and 2014. Of these deaths, 241 were to Stark County Children. A comparison of the percent of death by Manner of Death from our local data and the state data is provided in **(Table 3)**. When looking at this side by side comparison, it is easy to see that Stark County children are dying from the same/similar causes as those across the rest of the state of Ohio.

Table 4 below shows that the largest number of deaths were to those children/infants less than a year of age for both our local children and those across the state of Ohio.

According to the 2013 mortality data from the Center for Disease Control and Prevention (CDC) this is also the trend across the nation. During 2013, there were 23,440 deaths to infants (those less than one year of age) across the United States (U.S.). This accounts for over half of all deaths to children across the U.S. The bar graph below **(Figure 5)** shows a breakdown of the manner and cause of death for Stark County children over the past five years.

Figure 5: Manner of Death 2010-2014

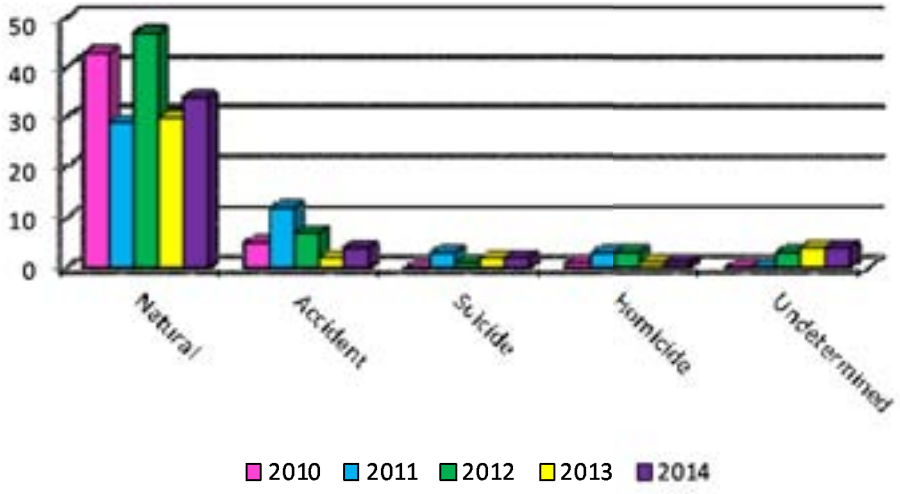


Table 4: Percent of Deaths 2010-2014 by Age Group

Age Group	Stark County	Ohio
< 1 Year	70.95%	67.81%
1-4 Years	8.30%	10.48%
5-9 Years	3.32%	5.19%
10-14 Years	8.30%	6.86%
15-17 Years	9.13%	9.66%

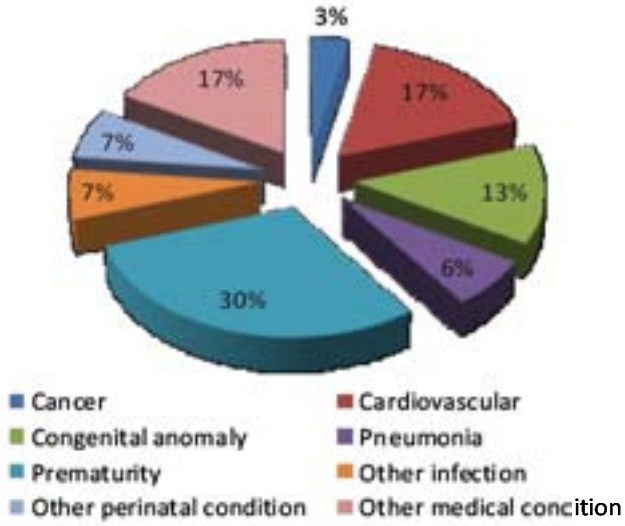
Natural Deaths 2013

- 77% of total deaths were due to Natural Causes in 2013
- 80% of Natural deaths were to infants under 1 year of age

Natural deaths to infants will be reported in greater detail in the Infant Mortality section of this report on pages 20-27. There were 6 natural deaths to children over one year of age, as shown in **Table 5** below.

Natural Deaths from preventable causes occur rarely in children, however there were two deaths from pneumonia during 2013 and a total of 17 over the past fifteen years. According to 2013 CDC's data there were over four hundred deaths to children under the age of 15 across the U.S. from pneumonia.

Figure 6: 2013 Natural Deaths by Type



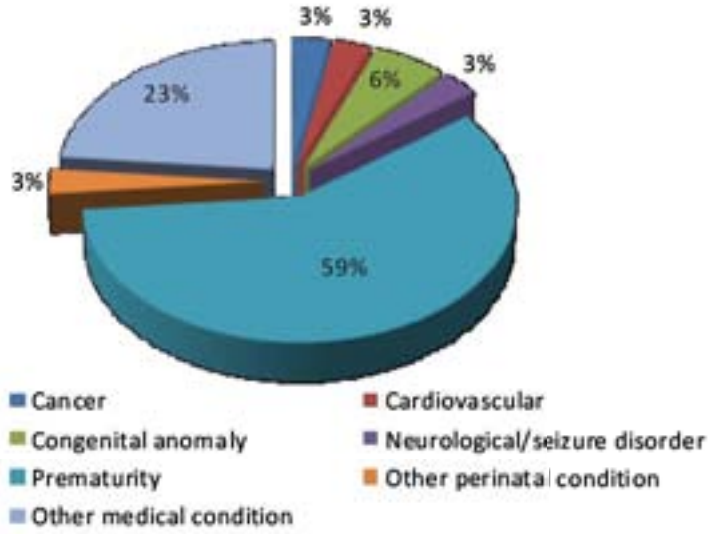
Pneumonia is caused by a number of infectious agents including viruses, bacteria, and fungi. It can cause mild to severe illness in people of all ages and is often life threatening in young children. The most common causes of pneumonia are: influenza, respiratory syncytial virus (RSV), streptococcus pneumonia, haemophilus influenza, measles, pertussis, and chickenpox. Preventing pneumonia in children is an essential strategy to reduce child mortality. Timely immunization against the common causes through vaccination with: Influenza, Prevnar13, HIB, MMR, DTaP, and Varicella is the most effective way to prevent pneumonia.

Table 5: 2013 Types of Natural Death by Age Group

Types of Natural Death by Age	<1 Year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Cancer	0	0	0	1	0	1
Cardiovascular	4	0	0	0	1	5
Congenital anomaly	4	0	0	0	0	4
Pneumonia	1	1	0	0	0	2
Prematurity	9	0	0	0	0	9
Other infection	2	0	0	0	0	2
Other perinatal condition	1	0	1	0	0	2
Other medical condition	3	1	0	0	1	5
Total	24	2	1	1	2	30

Natural Deaths 2014

Figure 7: 2014 Natural Deaths by Type



- 76% of total deaths were due to natural causes in 2014
- 94% of Natural deaths were to infants less than one year of age.

Natural deaths to Infants will be reported in greater detail in the Infant Mortality section of this report on pages 20-27.

Despite there being 34 Natural Deaths, only 2 were to children over one year of age. A breakdown of Natural deaths by type and age group is shown in **Table 6** below.

Birth defects are often the primary cause of premature births. According to the National Center on Birth Defects and Developmental Disabilities most recent data, every four and a half minutes, a baby is born with a major birth defect in the United States. That is 1 in every 33 babies. A birth defect is defined as a structural or functional abnormality present at birth that can cause premature birth, physical disabilities, intellectual or developmental disabilities, and many other health problems. Researchers have identified thousands of types of birth defects of varying degrees of severity. If not discovered and quickly treated many of these defects can cause lifelong disabilities and some are fatal. Children who suffer from birth defects often die from other medical conditions such as pneumonia, cardiovascular problems, infections and other medical conditions.

Table 6: 2014 Types of Natural Death by Age Group

Types of Natural Death by Age	<1 year	1-4 Years	5-9 Years	10-14 Years	15-17 Years	Total
Cancer	0	0	0	0	1	1
Cardiovascular	1	0	0	0	0	1
Congenital anomaly	2	0	0	0	0	2
Neurological/seizure disorder	1	0	0	0	0	1
Prematurity	20	0	0	0	0	20
Other perinatal condition	1	0	0	0	0	1
Other medical condition	7	0	0	1	0	8
Total	32	0	0	1	1	34

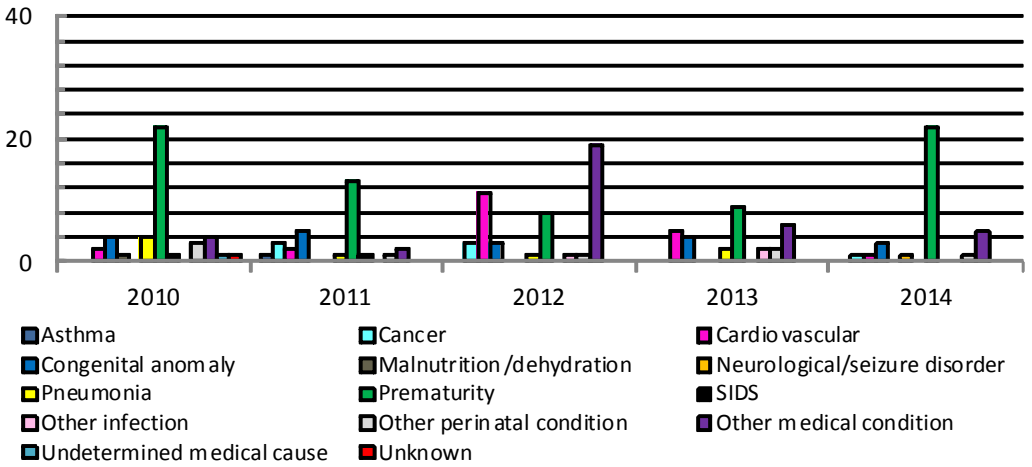
Table 7: 2010-2014 Types of Natural Death Group

Type of Natural Death	Stark County	Ohio *
Natural Deaths	**183**	**5,234**
Any Injury	0.00%	0.25%
Asthma	0.55%	0.53%
Cancer	3.83%	4.85%
Cardiovascular	11.48%	5.41%
Congenital anomaly	10.38%	17.46%
Influenza	0.00%	0.11%
Low Birth Weight	0.00%	0.13%
Malnutrition/dehydration	0.55%	0.11%
Neurological/seizure disorder	0.55%	2.20%
Pneumonia	4.37%	2.58%
Prematurity	40.44%	45.26%
SIDS	1.09%	1.55%
Other infection	1.64%	2.96%
Other perinatal condition	4.37%	2.54%
Other medical condition	19.67%	12.82%
Undetermined medical cause	0.55%	0.25%
Unknown	0.55%	0.97%

Natural Deaths 2010-2014

Locally and across the state it is easy to see that Prematurity was the primary cause of natural deaths. In Stark County, more than 80% of the types of natural deaths can be attributed to the child's perinatal condition **(Table 7)**. Whether it is a congenital anomaly, cardiovascular, prematurity, other perinatal condition, or other medical condition listed as the primary cause of death, most are linked to the child's birth in some way. Recommendations for prevention of these types of deaths are discussed in detail in the Infant mortality section of this report.

Figure 8: 2010-2014 Natural Deaths



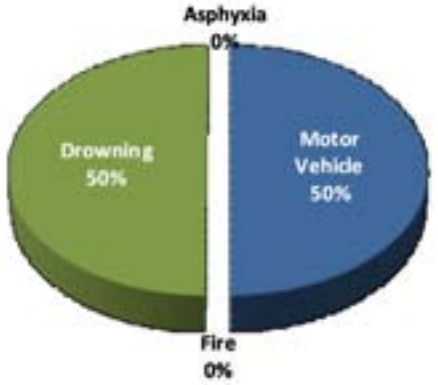
Recommendations for Prevention of Natural Deaths

- The board recommends children receive the vaccinations recommended by the Advisory Committee on Immunization Practices (ACIP). Further information about these vaccines can be found at www.cdc.gov/vaccines .
- Although influenza is a vaccine-preventable disease, severe illness and death still occur to high risk populations and to otherwise healthy individuals. According to Ohio Department of Health data, approximately 36,000 people die in the United States each year of complications from influenza. The board recommends that physician's offices continue to educate parents about the importance of influenza vaccination for themselves and their children.

Accidental Deaths 2013

During 2013, there were two accidental deaths (5% of the overall deaths). Both of these deaths were due to accidental suffocation. One death was a sleep related co-bedding death (Sleep related deaths will be discussed later in this report on pages 18 & 19). In addition, there was one suffocation death from airway obstruction by a piece of candy. Accidents & Homicides tied for the second leading cause of death at 33% each for 5-9 year olds. Over the past 15 years of review, 2013 was the only year with no motor vehicle related deaths to children.

Figure 9: 2014 Accidental Deaths



Accidental Deaths 2014

In 2014, accidental deaths accounted for 9% of the overall child deaths in Stark County. Accidents were the leading cause of death for both 5-9 year olds and 15-17 year olds across the county. There were two motor vehicle accidents, during 2014, one pedestrian struck at a cross walk and one involved children playing in a parked car that was accidentally set in motion. According to the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA), there were nearly five thousand pedestrians killed in traffic accidents across the US during 2012. That averages out to one crash-related death every 2 hours. Investigations of the accidents mentioned above found several risk factors for the deaths: 1.) child standing too close to intersection, 2.) faulty cross walk signal, 3.) children playing unsupervised in a parked car, 4.) faulty shift interlock (BTSI) feature.

There were two drowning deaths in 2014, one child in the 1-4 year old age group and one 15-17 year old. According to the Centers for Disease Control and Prevention's National Center for Injury Prevention Reporting system, for every child who dies in the US from drowning, another five receive emergency treatment for submersion related injuries.

(US Department of Transportation, National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts 2012: Pedestrians. Washington (DC): NHTSA; 2014 [cited 2014 Sept 25]. Available from URL: http://www-nrd.nhtsa.dot.gov/Pubs/811888.pdf)

Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. [cited 2012 May 3]. Available from: URL: http://www.cdc.gov/injury/wisqars

Accidental Deaths 2010-2014

Over the last five years, 30 Stark County children died from accidents. Whether it is from motor vehicle crashes (MVA), fire, drowning, or some other cause, these deaths are unexpected and usually the result of a tragically preventable circumstance. During this time period across the State of Ohio, there were over 1000* accidental deaths. **Figure 10** to the right shows the number of Stark County accidental deaths by cause. While **Table 8** below shows the percentage of accidental deaths by cause for both Stark County and the State of Ohio.

Figure 10: 2010-2014 Accidental Deaths by Cause

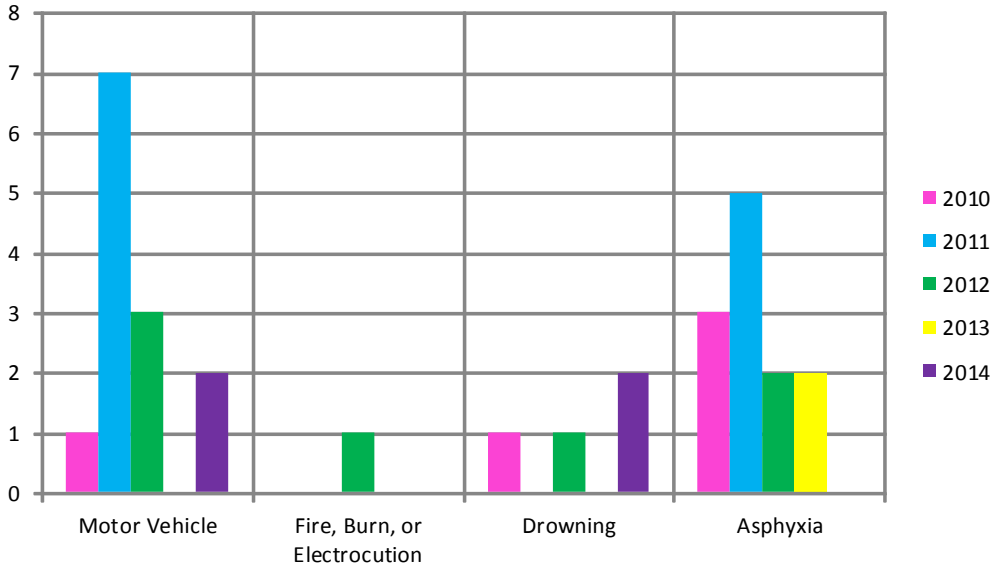
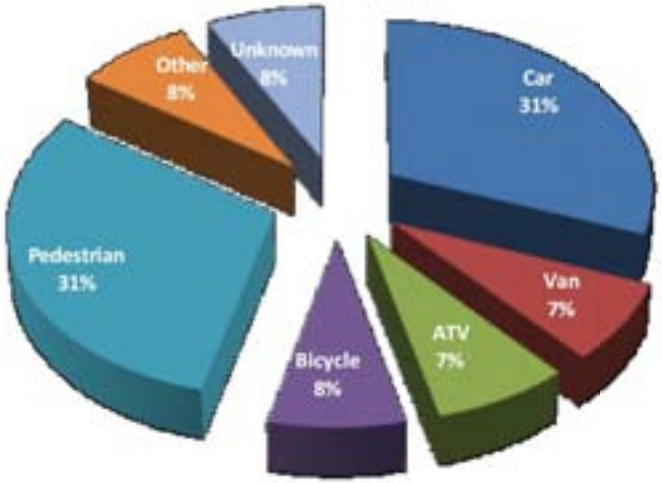


Table 8: 2010-2014 Percentage of Accidental Deaths by Cause

Types of Accidental Deaths	Stark County	Ohio*
Motor Vehicle Accidents	43.3%	37%
Fire, Burn, or Electrocution	3.3%	8%
Drowning	13.3%	14%
Asphyxia	40%	29%

Figure 11: 2010-2014 Motor Vehicle Accidents Type of Vehicle



Accidents were the leading cause of death for children 15-17 years of age in both Stark County and across the State of Ohio during this time period. Accounting for nine of the twenty-two local 15-17 year old deaths (41% of deaths in age group) and 245* of the States 704* 15-17 year old deaths (35%* in age group) respectively.

Figure 11 to the left shows a breakdown of the types of motor vehicles involved in the 13 MVA deaths that occurred in the past five years to Stark County children.

Accidental Deaths 2010-2014

The second leading cause of accidental death was Asphyxia. There were 40% of the 30 accidental deaths between 2010 and 2014 due to Asphyxia. Of these Asphyxia deaths, 92% were to children under one year of age. These deaths are addressed in further detail on page 19 of this report.

Table 9: 2010-2014 Factors involved in Drowning Deaths

Factors	Lake/River/ Pond/Creek	Pool/Hot Tub/Spa	Total
Deaths Reviewed	3	1	4
Child wearing floatation device	0	0	0
Child could swim	1	1	2
No barriers to water	0	1	1
Child not supervised, but needed	0	0	0
Child used alcohol/drugs prior to incident	1	0	1
Supervisor impaired by alcohol/drugs	0	0	0

Drowning was the third leading cause of accidental death locally over the five year time period, accounting for 13% of the accidental deaths. Surprisingly, 50% of these deaths were to teens 15-17 years of age. **Table 9** to the left shows a breakdown of the factors involved in these drowning deaths. Drowning was the leading cause of death for children one to four years of age across the State of Ohio accounting for 73* of the 219* accidental deaths in this age group.

Recommendations for Prevention of Accidental Deaths

- The Board recommends that families use locks, latches, and/or alarms attached high up on the doors of any home that is located near a body of water such as: a lake, pond, or swimming pool to ensure that children can not slip out of the house and head towards the water. This means using latches and locks that children cannot reach or open to ensure that they cannot slip away.

- Each year hundreds of children across the U.S. are hospitalized or even killed after accidentally setting a car into motion. In 2007, the Cameron Gulbransen Kids Transportation Safety Act was passed requiring all light vehicles with automatic transmissions built in the U.S. after 2010 to include a “brake transmission shift interlock” (BTSI) feature. This feature prevents a vehicle from being shifted out of the park position unless the brake pedal is depressed. Properly working BTSI parts can help to prevent accidental deaths such as the one that occurred locally in 2014.

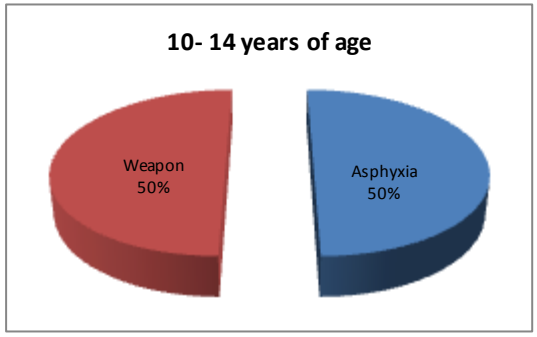
Suicide Deaths 2013 & 2014

There were four suicide deaths in 2013 and 2014. Two deaths each year with 50% of the deaths in the 10-14 year old age range and 50% in the 15-17 year old age range.

Suicide Deaths 2010-2014

Table 10 to the right shows the factors involved in those suicide deaths over the last five years. During this time period 75 % of the suicide deaths were 15-17 years of age , and 25% of were 10-14 years of age.

Figure 12 & 13: 2010-2014 Methods of Suicide by Age Group



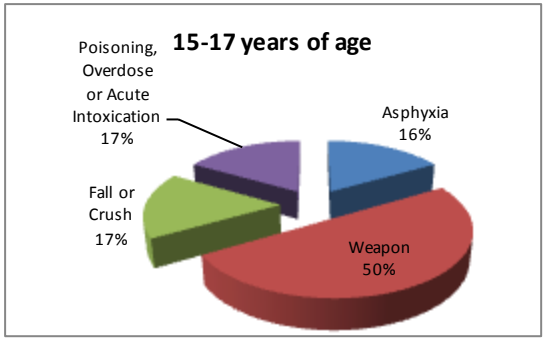


Table 10: 2010-2014 Factors involved in Suicide Deaths

Suicide Deaths Reviewed	8
History of substance abuse	1
Drug/alcohol impaired at time of incident	1
History of mental illness	1
Gay/lesbian/bisexual/questioning	1
History of maltreatment as victim	3
Left a note	2
Talked about suicide	3
Prior suicide threats were made	2
Receiving mental health services at time of death	1
On medications for mental illness	1
History of self mutilation	1
Contributing Factors	
Family discord	2
Argument with parents/caregivers	1
Breakup with boyfriend/girlfriend	1
Other death of friend or relative	1
Bullying as victim	0
Bullying as perpetrator	0
Other serious school problems	1

Recommendations for the Prevention of Suicide Deaths

- The board recommends that suicide prevention classes such as Teen Screen and Red Flags be incorporated into all Stark County schools. The board recommends the use of an evidence based youth suicide prevention program in Stark County Schools such as those listed on the Suicide Prevention Resource Centers webpage: Lifelines; SOS Signs of Suicide; or LEADS for Youth (Linking Education and Awareness of Depression and Suicide). In addition, the board also recommends that youth who are being treated for depression should have access to counseling services. All parents and caregivers of youth should be advised to safely store weapons and medication, especially those with youth in treatment for depression.

Homicide 2013 & 2014

Table 11 to the right shows the number of Homicides and the percentage of total deaths for both our local data and the state.

Table 11: 2013 & 2014 Homicides

	Stark		Ohio*	
	2013	2014	2013	2014
Number of Homicides Deaths	1	1	39	46
Percentage of Total Deaths from Homicide	3%	2%	4%	4%

Homicide 2010-2014

Firearms were used in nearly 60% of all local child homicides over the past 5 years.

As seen in **Table 12** below, between 2010 and 2014 there were a total of nine Homicide deaths to children under the age of 18 in Stark County. Preliminary data for the State of Ohio shows 304* homicide deaths to children. Homicides accounted for 4% of the total deaths for both Ohio and Stark County over the past five years. **Figures 14 & 15** to the right show the age of the victims.

Figure 14: 2010– 2014 Stark Homicides

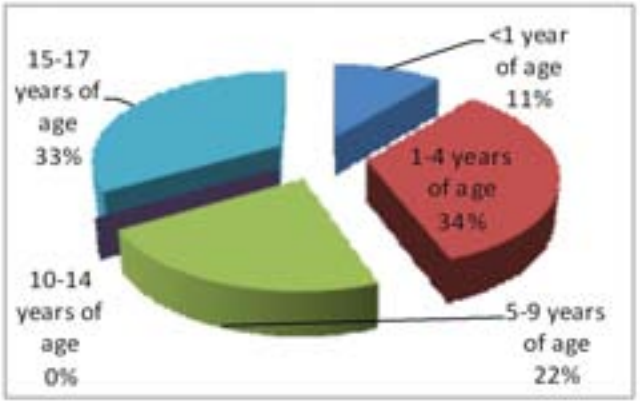
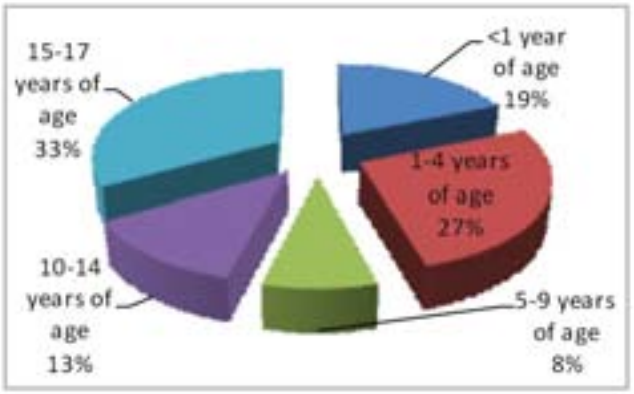


Table 12: 2010-2014 Homicides

Homicide 2010-2014	<1 Year of age	1-4 years of age	5-9 years of age	10-14 years of age	15-17 years of age	Total
Any Medical Cause	1	0	0	0	0	1
Asphyxia	0	1	0	0	0	1
Weapon	0	2	2	0	3	7
Sub Total	1	3	2	0	3	9

Figure 15: 2010– 2014 Ohio* Homicides



Recommendations for the Prevention of Homicide

- The board recommends a gun lock-up public education campaign such as the one offered by the National Crime Prevention Council (NCPC) and the Advertising Council, Inc. This campaign encourages firearm owners to store firearms safely by locking them up where children, at-risk youth, potential thieves, and those who intend to harm themselves or others, cannot access them. The ad campaign also asks firearm owners to report any lost or stolen firearms to local law enforcement immediately. According to a study by the Rand Corp. for the Centers for Disease Control and Prevention, approximately 1.4 million homes have firearms making them accessible to over 2 million children. The board supports the Children's Defense Fund recommendation that Ohio legislature enact a law that would require all guns to be stored safely and securely in any situation where a child may access them.

Sleep Related Deaths 2013 & 2014

Sleep related deaths can include deaths from asphyxia, or Sudden Infant Death Syndrome (SIDS). The most common cause is **Asphyxia–** this includes any situation where there is a decrease in oxygen and an increase in carbon dioxide in the body. These deaths are often due to *overlay, positional asphyxia, suffocation, entrapment, or strangulation.* **Sudden Infant Death Syndrome (SIDS)-** is the sudden death of an infant under one year of age that remains unexplained. SIDS is a diagnosis of exclusion, therefore an extensive investigation must be conducted through autopsy, death scene investigation, and review of the infant's health history. Some of the known risk factors for SIDS include: infants sleeping on their stomachs, soft infant sleep surfaces and bedding, maternal smoking during pregnancy, second-hand smoke exposure, overheating, and prematurity or low birth weight.

The distinction between a SIDS deaths and other sleep related causes of death such as those mentioned above is often difficult to determine.

There were a total of four sleep-related deaths that occurred in Stark County in 2013 and 2014, one in 2013 and three in 2014. Two were infants between 2 and 3 months of age and two were children 1-4 years of age.

Table 13: 2013 & 2014 Factors Involved in Sleep Related Deaths

Factor	2013	2014
Deaths Reviewed	1	3
Not in a crib or bassinette	1	1
Not sleeping on back	1	0
Unsafe bedding or toys	0	0
Sleeping with other people	1	1
Obese adult sleeping with child	0	0
Adult was alcohol impaired	0	0
Adult was drug impaired	0	0
Caregiver/Supervisor fell asleep while bottle feeding	1	0
Caregiver/Supervisor fell asleep while breast feeding	0	0

Table 13 above shows the factors that contributed to these deaths. The most important messages regarding infant safe sleep include: placing the baby to sleep alone; on their back; and in a safe empty crib with a firm surface.

For further information about infant safe sleep including brochures, posters, videos and fact sheets see the Safe Sleep webpage of the Ohio Department of Health at ***www.odh.ohio.gov/safesleep*** **.**

Sleep Related Deaths 2010-2014

As mentioned on page 15 of this report there were 11 Accidental deaths due to Asphyxia to children under one year of age, however, there were many more deaths classified as undetermined that resulted from unsafe sleeping conditions. Over the last five years there were a total of 23 infant and child sleep related deaths locally and over 800* across the state of Ohio. **Table 14** to the right shows the breakdown of factors involved in those deaths.

Table 14: 2010 -2014 Factors Involved in Sleep Related Deaths

Factor	Stark County	Ohio*
Deaths Reviewed	23	830
Not in a crib or bassinette	78.26%	68.07%
Not sleeping on back	43.48%	46.51%
Unsafe bedding or toys	8.70%	14.70%
Sleeping with other people	60.87%	49.52%
Obese adult sleeping with child	0.00%	8.80%
Adult was alcohol impaired	0.00%	2.65%
Adult was drug impaired	0.00%	2.05%
Caregiver/Supervisor fell asleep while bottle feeding	4.35%	1.93%
Caregiver/Supervisor fell asleep while breast feeding	4.35%	2.29%

Due to infant sleep related deaths being the second leading cause of death for infants under 1 year of age across the state of Ohio, legislation was passed in 2015 to mandate safe sleep education. Effective May 18, 2015, ORC 3701.66 and 3701.67 were enacted. These laws helped to establish a state wide Safe Sleep Education Program. According to the laws, the following entities are now required to distribute infant safe sleep education materials to their clients:

- Child birth educators and the staff of obstetricians' offices
- Staff of pediatric physicians' offices
- Staff of freestanding birthing centers and certain hospitals
- Staff of the existing Help Me Grow program
- Each child care facility operating in Ohio
- Public children services agency

Recommendations for the Prevention of Sleep Related Deaths

- The board continues to support the Stark County Safe Sleep Task Force in their effort to educate parents and caregivers about safe sleep practices, placing the baby to sleep alone, in a safety approved crib with no blankets, pillows, or bumper pads. The board also recommends that all community agencies adopt the Ohio Department of Health's Policies on Infant Safe Sleep and Infant Feeding. The board recommends safe sleep education for new mothers in the hospital prior to discharge.

FEATURED SECTION: INFANT MORTALITY

What is Infant Mortality Rate?

Infant Mortality is the death of an infant before its first year of life. Unfortunately, nearly 24,000 infants die in the U.S. every year. These deaths are devastating to both the families who experience them and to us as a nation. Infant mortality rate is determined by the following calculation:

$$\frac{\text{\# of deaths to children < 1 year of age during a given time period}}{\text{\# of live births during the same time period}} \times 1{,}000$$

This rate is used to compare the health and well-being of populations across and within countries.

It is an important measure of how well we care for the women and children and the overall health of our society.

The bar graph to the right shows the comparison of the 2013 Infant Mortality rates for Stark County, Ohio, and the U.S. separated by race. There were 29 infant deaths in 2013.

- 4 (13%) mothers were 19 years of age or younger
- 15 (52%) were less than 2,500 grams
- 14 (48%) mom's were participating in the WIC program during their pregnancy
- 14 (48%) were receiving assistance through the Medicaid system
- 13 (45%) were less than 37 weeks gestation
- 6 (20%) were born at 24 weeks gestation or less
- 12 (41%) died in the first 24 hours of life
- 21 (72%) died in the first 28 days of life

The chart at the right shows the rate of pre-term infants for Stark County in 2013 by race.

Figure 16: 2013 Infant Mortality

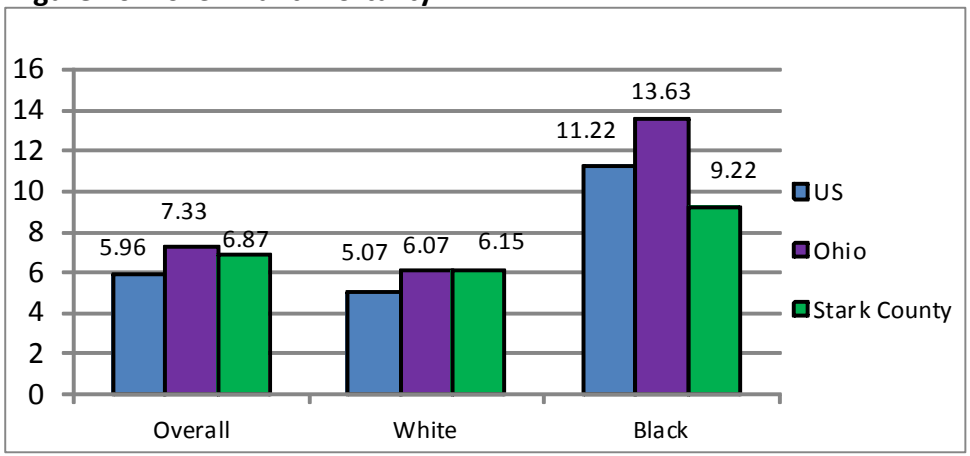


Table 15: 2013 Percentage of Pre-term Infants by Race

Race Category	Birth Count	Birth Count %
African American (Black)	95	2.1
Asian	5	1.3
Native American	*	*
Pacific Islander/Hawaiian	0	0.0
White	377	1.1

Infant Mortality

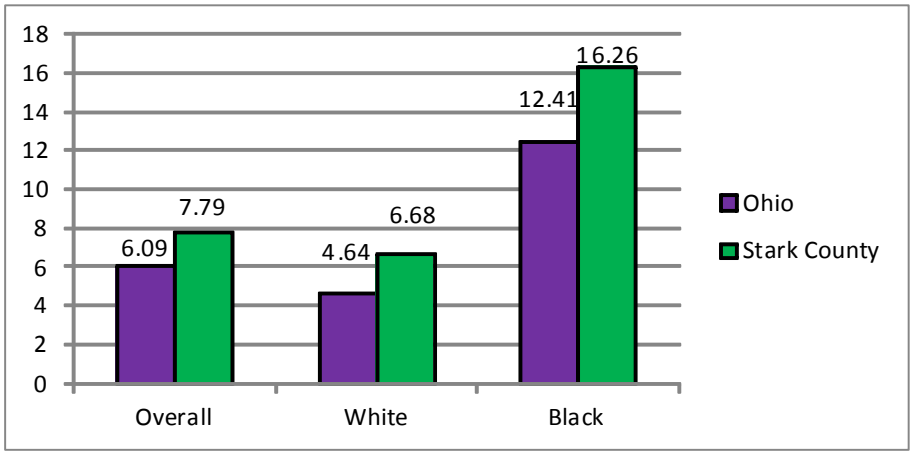
The infant mortality rate is affected by biological, behavioral, social, cultural, economic and environmental factors. It is most often caused by:

- Being born too small or too soon
- Serious birth defects
- Unsafe sleeping conditions
- Maternal complications of pregnancy

The bar graph to the right shows the comparison of the 2014 Infant Mortality rates for Stark County, and Ohio separated by race. United States statistics for 2014 were not available at the time of this report. There were 33 infant deaths in 2014 in Stark County.

- 5 (15%) mothers were 19 years of age or younger
- 26 (79%) were less than 2,500 grams
- 11 (33%) moms were participating in the WIC program during their pregnancy
- 15 (45%) were receiving assistance through the Medicaid system
- 27 (82%) were less than 37 weeks gestation
- 19 (58%) were born at 24 weeks gestation or less
- 19 (58%) died in the first 24 hours of life

Figure 17: 2014 Infant Mortality



- 27 (82%) died in the first 28 days of life

The chart at the right shows the rate of pre-term infants for Stark County in 2014 by race (information provided by Ohio Department of Health Data Warehouse).

Table 16: 2014 Percentage of Pre-term Infants by Race

Race Category	Birth Count	Birth Count %
African American (Black)	72	1.6
Asian	6	1.6
Native American	0	0.0
Pacific Islander/Hawaiian	0	0.0
White	426	1.3

Infant Mortality in Stark County 2010-2014

- 171 (70.95%) of deaths to Stark County children between 2010 and 2014 were to those less than 1 year of age.
- 28 (16%) mothers were 19 years of age or younger
- 34 (20%) of mothers had less than a high school education
- 106 (62%) were less than 2,500 grams
- 59 (35%) moms were participating in the WIC program during their pregnancy
- 66 (39%) were receiving assistance through the Medicaid system
- 106 (62%) were born less than 37 weeks gestation
- 71 (42%) were born at 24 weeks gestation or less
- 76 (44%) died in the first 24 hours of life
- 128 (75%) died in the first 28 days of life

Figure 18: 2010-2014 Infant Mortality

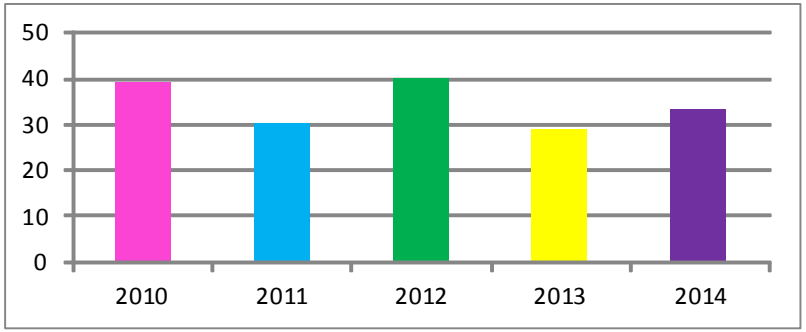


Figure 19: Infant Mortality 5 year Average

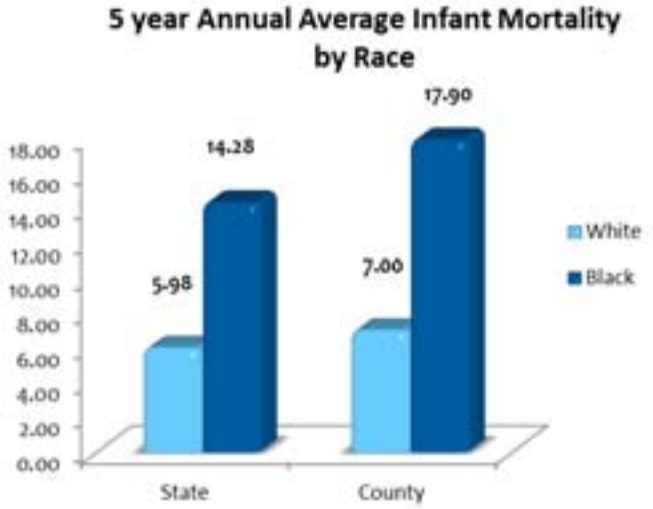
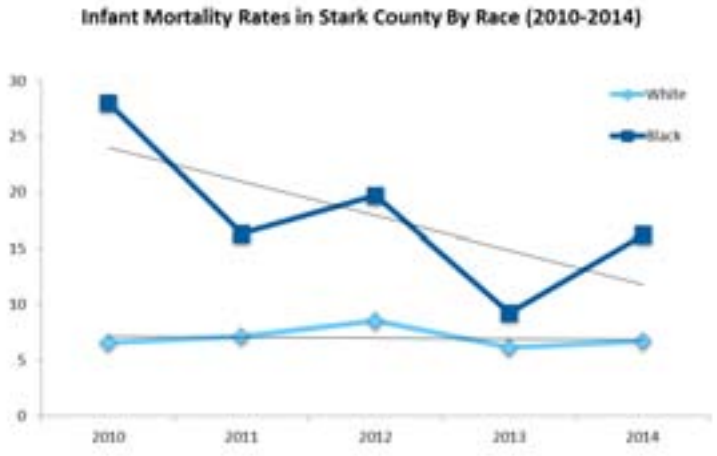
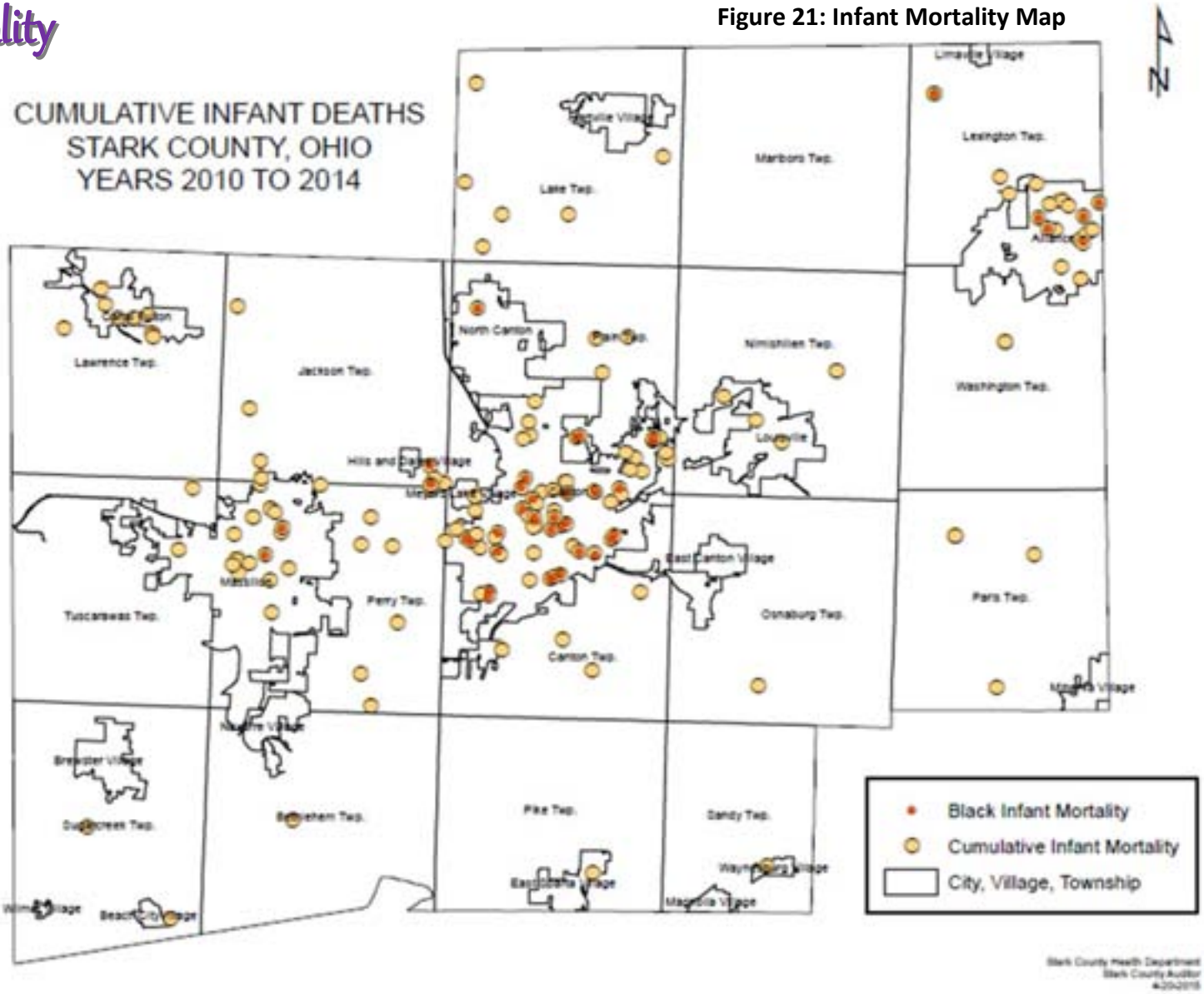


Figure 20: Infant Mortality Rate by Race



Infant Mortality

Figure 21: Infant Mortality Map



The map above shows the distribution of Infant deaths by residency over the past five years. As indicated on this map the majority of infant deaths in Stark County occurred within the city limits of Alliance City, Canton City, and Massillon City.

Black infant deaths are represented by the orange circles for a visual comparison to the overall number of infant deaths shown in yellow.

Recommendations to Reduce Infant Mortality in Stark County

- The Board recommends that physician's offices encourage women of child bearing age to participate in smoking cessation programs such as: the BABY& ME- Tobacco Free Program. The board also recommends for local OBGYN offices to implement smoking cessation programs in their offices such as the Ohio Smoke Free Families-5 A's smoking cessation program. Further information regarding the two programs mentioned above can be found at www.odh.ohio.gov/ .

- The Board recommends that physician's offices educate families about the importance of proper birth spacing between pregnancies. Birth Spacing is the amount of time between one live birth and the next. Research has shown that a time frame of less than 18 months between live births can have a negative effect on the health of both the mother and child.

- The Board recommends all physicians' offices (including Pediatricians) educate families about the need for females 15 years of age and older to take folic acid daily. Folic acid is helpful in the development of new cells not only those of a developing fetus but those new cells that our body develops daily such as hair, skin, and nails.

- The Board recommends all physician's help their female patients to develop a reproductive life plan. A reproductive life plan is a personalized plan centered on a woman's dreams and goals for the future. Having this plan in place can help a mother to appropriately prevent pregnancy when she is not ready, and help her to take control over what she chooses to do when it comes to her health.

- The Board recommends that physicians follow the American College of Obstetricians and Gynecologists recommendations for sexually transmitted disease testing during pregnancy. Tests routinely recommended during early pregnancy include: Hepatitis B, HIV, syphilis, and chlamydia. Testing for Hepatitis C and gonorrhea are recommended if risk factors are present. For syphilis and chlamydia the board recommends that physicians rescreen women younger than 25 years of age and those with risk factors in the 3rd trimester.

Recommendations to Reduce Infant Mortality in Stark County

- The Board recommends that physicians follow the guidelines set forth by the American College of Obstetrics and Gynecologists (ACOG's) for Group B Strep testing during the prenatal period. Group B strep is a type of bacteria normally found in the body. In most instances this bacteria does not cause severe illness, however, in pregnant women it can cause infection of the uterus, and urinary tract. This infection can be passed onto the infant causing a serious and occasionally life threatening infection. Pregnant women should be tested between 35 and 37 weeks gestation. If tested prior to this time frame it is recommended that the mother be tested again during the 35 to 37 week gestation time frame. Both rectal and vaginal cultures are recommended.

- The Board recommends community based programs to address the racial disparities of infant mortality across Stark County such as the Keep Our Babies Alive program at the Stark County Health Department.

- The Board recommends early and comprehensive prenatal care for all pregnant women. The board further recommends that prenatal care delivery utilizing the "Centering Pregnancy" model be increased in the community.

- The Board supports the following position statement, of the Committee on Obstetric Practice of the American College of Obstetric Practice- "although the Committee on Obstetric Practice believes that hospitals and birthing centers are the safest setting for birth, it respects the right of a woman to make a medically informed decision about delivery. Women inquiring about planned home birth should be informed of its risks and benefits based on recent evidence." (ACOG Committee on Obstetric Practice. ACOG Committee opinion no. 476: planned home birth [published correction appears in Obstet Gynecol. 2011;117(5):1232]. Obstet Gynecol. 2011;117(2 pt 1):425–428). The Stark County CFR Board recommends hospital delivery due to the prevalence of unpredictable emergencies that can occur during delivery which require immediate medical care on a level unable to be provided in a home setting.

- The Stark County Child Fatality Review Board supports the efforts and initiatives being implemented by T.H.R.I.V.E. For further information regarding T.H.R.I.V.E. log onto the project's website at https://sites.google.com/a/cantonhealth.org/stark-county-equity-institute/

Stark County Toward Health Resiliency for Infant Vitality and Equity

In 2013, Stark County became part of a state-wide initiative to advance equity in birth outcomes. The Stark County coalition named T.H.R.I.V.E. seeks to both decrease the infant mortality rate in Stark County and to decrease the disparity in birth outcomes seen between white and black infants. T.H.R.I.V.E. is a public – private partnership comprised of agencies, organizations, and community members dedicated to implementing targeted interventions for the purpose of reducing the rate of infant mortality and health disparities.

Vision- All babies celebrate their first birthday **Mission-** Reduce infant mortality rates and disparity in infant mortality

Interventions: Two interventions were selected that would provide for the greatest possible impact in reducing infant mortality and disparity: Safe Sleep Awareness and Centering Pregnancy Group Prenatal Care.

Safe Sleep

How We Will Make this Impact

- Hospitals will establish safe sleep policies and model appropriate behavior
- Providers of early care and education institutionalize safe sleep practices
- Offer professional development and general community education programs
- Train First Responders to identify hazards to safe sleep and provide appropriate information on resources

How We Will Measure Success

- Decrease the % of infant deaths due to sleep
- Decrease the % of African American infant deaths due to sleep
- #/% of safe sleep environments observed in homes via home visitation programs
- # of individuals trained at Train-the-trainer session for those working with caregivers and family members
- # of people reached through outreach education on safe sleep initiatives
- # of hospitals in Stark County implementing safe sleep policies
- # of home visiting agencies providing safe sleep standardized curriculum
- # of families who received education through a Cribs for Kids class and Safe sleep kits distributed

Stark County Toward Health Resiliency for Infant Vitality and Equity (T.H.R.I.V.E.)

Centering Pregnancy Group Prenatal Care with Care Coordination

Eight to twelve pregnant women with similar due dates meet in a group with their healthcare provider for prenatal care.

Group sessions include facilitated discussion of pregnancy, birth and newborn care as well as overall health, and many other topics.

Centering pregnancy provides quality prenatal care, no wait times in the waiting room, appointment scheduling ahead of time for entire pregnancy and a support system with other moms in the group.

How We Will Make this Impact

- Partnership between two hospitals offering Centering programs, T.H.R.I.V.E., and community partners
- In Stark County, pregnant women will have access to a community-based Care Coordinator who can assist them in accessing early prenatal care at one of two existing hospital-supported Centering programs or via routine individual prenatal office visits.
- Information on Centering and the services of the Care Coordinator will be disseminated through partner agencies, faith community, and word-of-mouth with presentations and education sessions conducted by a T.H.R.I.V.E. Outreach consultant.

How We Will Measure Success

- % of pregnant women with early prenatal care
- # of pregnant women enrolled in Centering
- Average # of Centering sessions attended
- # of women accessing individual prenatal care
- # of community partners/sites that provide education, outreach , and referrals on early prenatal care and Centering
- # of referrals from partner organizations
- # of women receiving care coordination services including assistance with transportation, childcare, referrals to wraparound services, enrollment in Centering or routine prenatal care visits, and home visits.

Additionally, through T.H.R.I.V.E. a Fetal-Infant Mortality Review (FIMR) board has been convened to further identify and analyze factors that contribute to fetal and infant death through chart review and interviews with parents who have experienced an infant loss. Through this process, a multi-disciplinary case review team makes recommendations for system changes and a community action team then takes action on these recommendations. Results of this review will be included in the 2015 CFR report.

Preventability 2013 & 2014

The main goal or purpose of the Child Fatality Review Board (CFR) is to reduce preventable child deaths in Stark County. The CFR board attempts to accomplish this by identifying any circumstances and/or factors that lead to these childhood death's and determining if the death could have been prevented, if any, of these factors were not present. Eventually classifying these deaths into three categories of preventability: 1.) Yes, probably preventable; 2.) No, probably not preventable; 3.) Could not determine; 4.) Unknown

According to the most recent published Childhood Injury Report from 2012 published by Safe Kids Stark County there were over 11,400 injuries to children in Stark County that required a visit to either an Immediate Care Facility or Hospital Emergency Department during 2012.

The charts to the right answer the question "Could the death have been prevented?". In 2013 and 2014 the majority of deaths to Stark County children, were classified by the CFR board as No, probably not preventable, based on the data that was available at the time of review.

Figure 22: 2013 Preventability

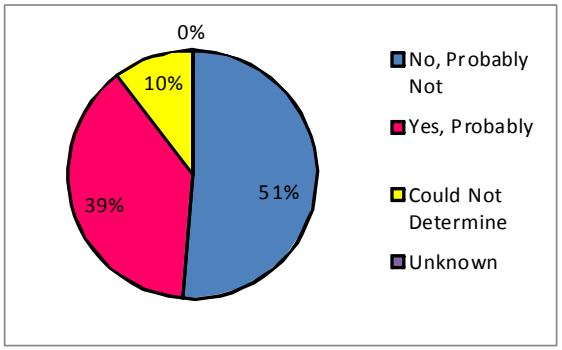
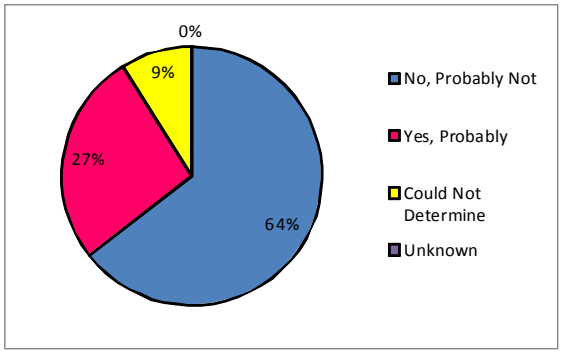


Figure 23: 2014 Preventability



Investigations

The case investigations information for those deaths that occurred in 2013 & 2014, are listed in the table to the right.

Table 16: 2013 & 2014 Case Investigations

Investigation Information	2013	2014
Number of Deaths Reviewed	39	45
Deaths were referred to medical examiner or coroner	15	11
Death were NOT referred to medical examiner or coroner	24	34
Autopsies were performed	13	11
Scene investigation were conducted	4	9
Toxicology screens were conducted	9	13
X-rays were taken	3	7
CPS record checks were conducted as result of death	7	33
Investigation found prior evidence of abuse	0	1
CPS action taken because of death	2	0

Preventability 2010-2014

The pie chart to the right shows that more than two-thirds of the deaths over the five year time frame were preventable. Table 17 below shows those 64 deaths that were deemed as preventable between 2010 and 2014 by manner of death. As you can see the majority of preventable deaths were to those manners of death that are usually thought of as preventable such as: accidents, homicides and suicides. However, 23% of those preventable deaths were from natural causes deemed preventable due to the risk factors that may have contributed to the death.

Figure 24: 2010-2014 Preventability

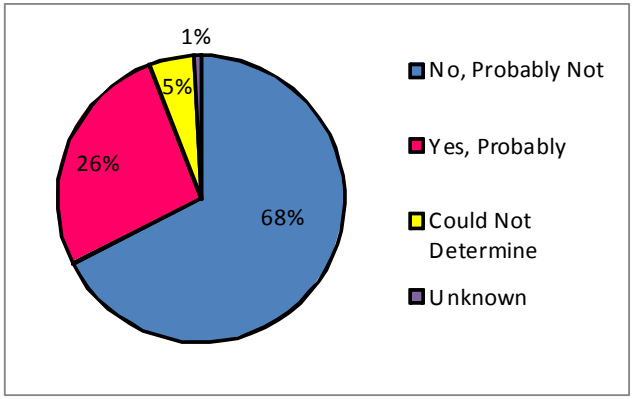


Table 17: 2010-2014 Preventability

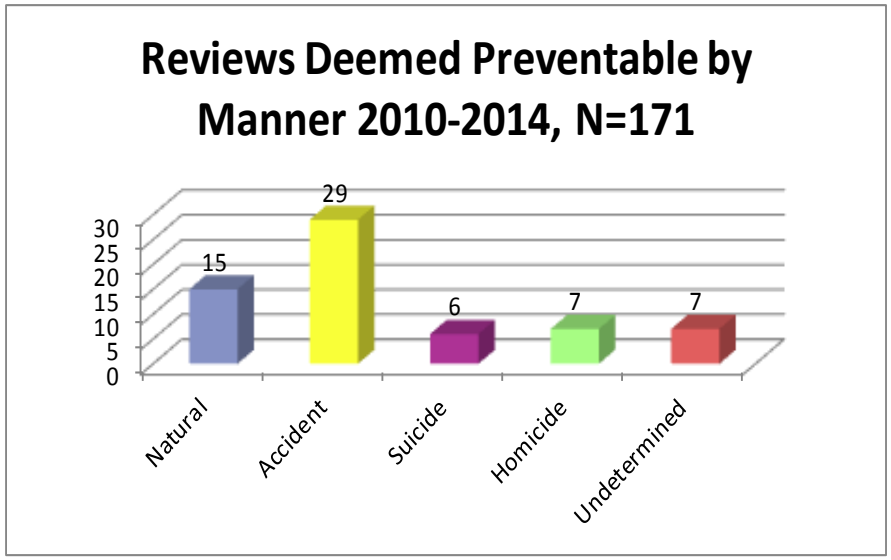


Table 18 to the right shows the investigation information for those deaths that occurred between 2010 and 2014. Over the five year time frame 34% of those children that died had cases that were referred to the coroner, 30% had autopsies performed and scene investigations were conducted in 22% of the cases.

Table 18: 2010 - 2014 Case Investigations

Investigation Information	2010-2014
Number of Deaths Reviewed	241
Deaths were referred to medical examiner or coroner	82
Death were NOT referred to medical examiner or coroner	158
Autopsies were performed	74
Scene investigation were conducted	54
Toxicology screens were conducted	65
X-rays were taken	20
CPS record checks were conducted as result of death	100
Investigation found prior evidence of abuse	4
CPS action taken because of death	6

Stark County Child Fatality Review Board Member Organizations

Mental Health and Recovery Services Board of Stark County

Protecting Health Since 1920

Stark County Job & Family Services

Police Canton, Ohio

Public Health Prevent. Promote. Protect. Canton City Health Department James M. Adams, RS, MPH Health Commissioner

Canton Fire Dept. Ohio

Stark County Sheriff's Office Sheriff George T. Maier

SMHA Stark Metropolitan Housing Authority

The Stark County Coroner